

3RD ALBANY CONFERENCE ON COMPUTATIONAL BIOLOGY

Phylogenetic & Structural Relationships Among Proteins

THURSDAY, SEPTEMBER 28 - SUNDAY, OCTOBER 1, 1995

Conference Site: Rensselaerville near Albany, New York USA

SPEAKERS

Steven A. Benner, *ETH - (Eidgenoessische Technische Hochschule)*
Structure prediction from sequence data.

Stephen Bryant, *National Institutes of Health*
An alignment model and fast algorithm for protein threading.

Cyrus Chothia, *Medical Research Council*

1. The use of key residues in model building: the outline structure of the NCAMs.
2. The structural classification of proteins (SCOP) database.

Jacquelyn S. Fetrow, *University at Albany - SUNY*
Chair: 3-D structural relationships among proteins.

G. Brian Golding, *McMaster University*
The chimeric origins of the eukaryotic nucleus.

David Hillis, *University of Texas*

Accuracy in phylogenetics: Applying the theory to a particular data set.

Charles Lawrence, *The Wadsworth Center, New York State Dept. of Health*
Bayesian methods for finding distant relationships in biopolymer sequences:
Are they structural or evolutionary?

Peter J. Munson, *National Institutes of Health*

Parametric, semi-parametric and nonparametric prediction of secondary structure
from homologous sequences.

Spencer V. Muse, *Pennsylvania State University*

Chris Sander, *EMBL, European Bioinformatics Institute*
DALI - Protein structure comparison and classification.

Caro-Beth Stewart, *University at Albany - SUNY*

Phylogenetic approaches to detecting adaptive molecular evolution.

Arlin Stoltzfus, *Dalhousie University*

What introns have to tell us about protein structure, and vice versa.

Joel L. Sussman, *Brookhaven National Laboratory*
The α/β hydrolase fold: Is this a case of divergent evolution?

Jeffrey L. Thorne, *North Carolina State University*

Using protein secondary structure to better understand protein evolution.

[Jeffrey Thorne, Nick Goldman and David Jones, co-authors]

Shoshana J. Wodak, *Universite Libre de Bruxelles*

Identification of short protein turn motifs by sequence and structure fingerprints.

ABOUT THE 1995 ALBANY CONFERENCE

Like its two predecessors ("Converging Approaches in Computational Biology" in 1990 and "Patterns of Biological Organization" in 1992), the aim of this conference is to explore the computational tools and approaches being developed in diverse fields within biology, with emphasis this year on phylogeny as apparent in relationships on the molecular level. The conference will be designed to provide an environment for a frank and informal exchange among scientists and mathematicians that is not normally possible within the constraints of topical, single-discipline meetings. The theme of the conference -

Phylogenetic and Structural Relationships Among Proteins

will be developed in five sessions: **3-D Structure Relationship Among Proteins, Data Bases, Phylogenetic Methods, Applications to Molecular Evolution, and Sequence-structure Interface**. Leading specialists in the various disciplines have been invited, with the degree of involvement in novel computational approaches as one of the most important criteria of selection.

We are seeking an interdisciplinary audience consisting of mathematicians, computer scientists, as well as molecular biologists. All participants will be invited to submit abstracts of posters, although submission is not mandatory. **If funding permits**, we will again sponsor **Young Investigator Awards** for graduate students and postdocs.

FORMAT OF THE MEETING

The Conference will consist of a keynote address, three morning and two evening sessions. Each session will be comprised of four 30-minute talks interspersed by question-and-answer periods of 15-20 minutes. A chair is assigned to each session who is responsible for facilitating the discussion, introducing new themes if necessary and providing overview. The chairs will also review submitted poster abstracts for especially pertinent material that might be included in the discussion periods.

Afternoons are free for discussion and workshops. One workshop is being planned on the topic "Integrated data bases: sequence, structure, taxonomy and literature" which would include demos. Another workshop will be held late Thursday afternoon to introduce non-biologists to the main issues of macromolecular structure and phylogeny to be addressed at the meeting.

SPONSORS

The Wadsworth Center, New York State Department of Health,
University at Albany, State University of New York, and Nucleic Acid Technologies Foundation

PROGRAM COMMITTEE

Joachim Frank & Carmen Mannella [Co-Chairs], Charles Lawrence, Patrick VanRoey - The Wadsworth Center;
Jacquelyn Fetrow, Caro-Beth Stewart, George Berg - University at Albany, SUNY; Jeffrey Bell - Rensselaer [RPI]

REGISTRATION INFORMATION

Conference fee of \$495 includes registration, accommodations (double occupancy), meals and transportation between the conference center and Albany Airport. Those wishing to present a poster must send a 1-page (*do not fold!*) abstract along with a check payable to **1995 ALBANY CONFERENCE**. (The Albany Conferences and The Rensselaerville Conference Center do not accept credit cards.) Registration fee and application are required by August 28, 1995. Registration is limited!

For further information contact Conference Coordinator Carole Keith

Phone: (1) 518-442-4327 FAX: (1) 518 442-4354 Email: carole@cnsibm.albany.edu
Mail: 1995 Albany Conference, PO Box 8836, Albany, NY USA 12208-0836

Name:

Affiliation:

Full Address:

City/State/Country/Zip:

Phone (include country code):

- I will present a poster (unfolded abstract enclosed)
- \$495 check payable to 1995 ALBANY CONFERENCE
- \$595 check for single accommodations (no guarantee)

*Phylogenetic & Structural Relationships Among Proteins
September 28-October 1, 1995*

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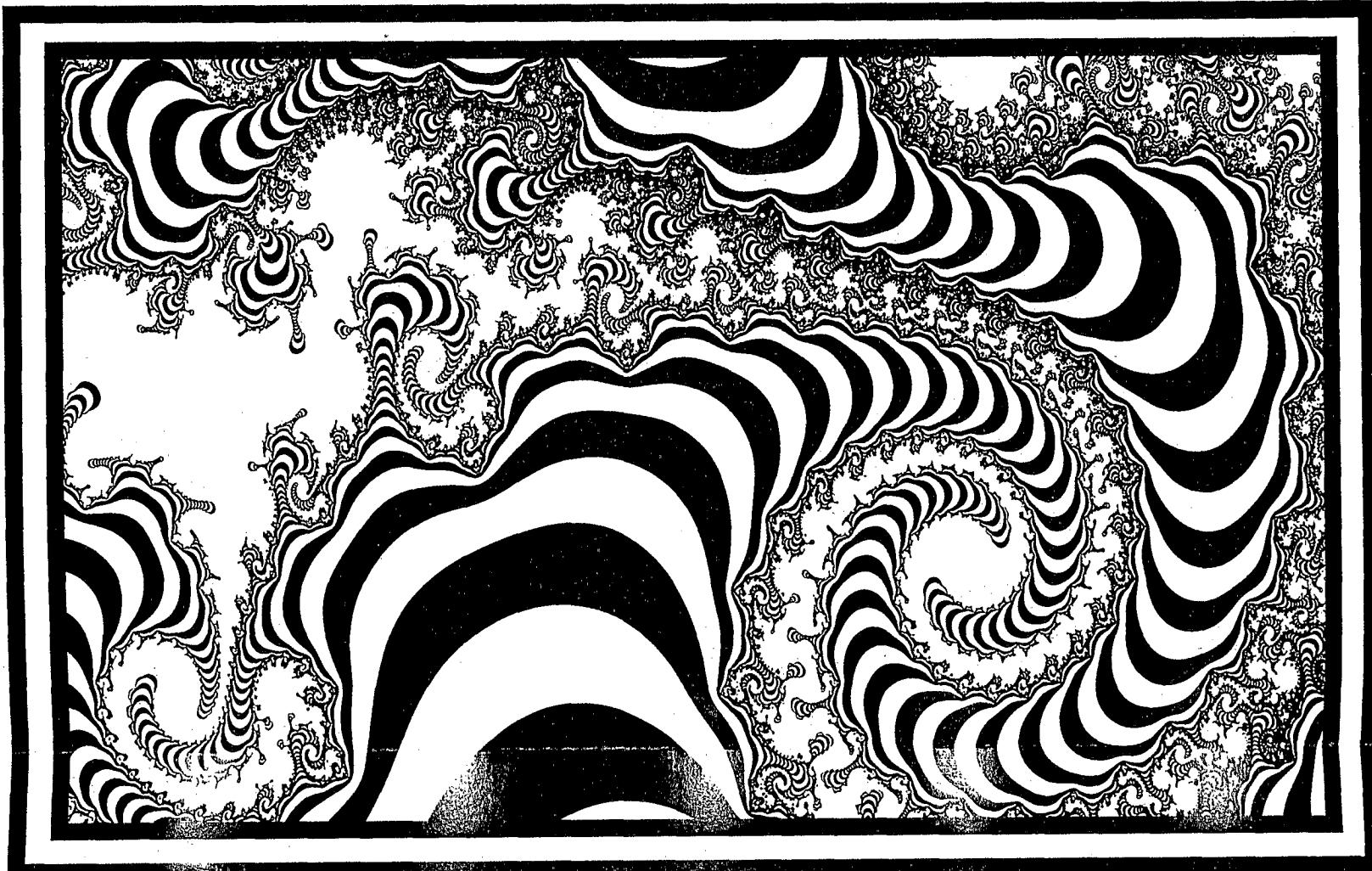
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Phylogenetic & Structural Relationships Among Proteins



A section of the image by H. Jürgens, H.-O. Peitgen, D. Saupe from *The Beauty of Fractals*, J.-O. Peitgen, P. Richter, Springer-Verlag, Heidelberg 1986

3RD ALBANY CONFERENCE ON COMPUTATIONAL BIOLOGY

SEPTEMBER 28 - OCTOBER 1, 1995
Rensselaerville, New York USA

SPEAKERS

Joel L. Sussman, Keynote Speaker, *Brookhaven National Laboratory/Weizmann Institute of Science*
AChE in 3D: New mysteries revealed from the crystal structure.

Steven A. Benner, *ETH (Eidgenoessische Technische Hochschule)*
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Stephen Bryant, *National Institutes of Health*
An alignment model and fast algorithm for protein threading.

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SPONSORED BY: Wadsworth Center, New York State Department of Health; Nucleic Acid Technologies Foundation; and Center for Molecular Genetics, University at Albany, State University of New York.

CONFERENCE AND APPLICATION INFORMATION

THE CONFERENCE begins with an opening session on Thursday evening, September 28. There will be morning and evening sessions on the following two days, and a morning session on Sunday, October 1. Afternoons will include time for informal discussions, workshops, viewing contributed posters, recreation and walks through the picturesque village of Rensselaerville and surrounding hill country. Rensselaerville Conference Center is a modern facility located 27 miles southwest of Albany, New York.

FOR FURTHER INFORMATION call conference coordinator Carole Keith: 1/518/442-4327 ■ FAX: 1/518/442-4354
Email: carole@cnsibm.albany.edu ■ Write: 1995 Albany Conference, PO Box 8836, Albany, NY 12208-0836 USA

Phylogenetic & Structural Relationships Among Proteins

September 28 - October 1, 1995
APPLICATION FORM

First/MI/Last Name: _____

Affiliation: _____

Full Address: _____

City/State/Country/Zip: _____

Phone: _____ (include country code) FAX: _____

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I wish to present a poster ... I have enclosed a one-page, unfolded, camera-ready

abstract, using 1½ inch margins.

I will not be presenting a poster but have included a brief statement

of my research interests.

Due by - August 31, 1995

Mail this form, check and abstract/research statement to:
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PAST ALBANY CONFERENCES

- "RNA Editing: An Evolving Mechanism of Gene Regulation" (1994)
- "Molecular Mechanisms of Drug Resistance" (1993)
- "Recombinant Vectors in Vaccine Development" (1993)
- "Patterns of Biological Organization" (1992)
- "Molecular and Cellular Responses to Oxygen" (1991)
- "Converging Approaches in Computational Biology" (1990)
- "Ion Channels: Molecular Structure and Genetics" (1989)
- "RNA: Catalysis, Splicing, Evolution" (1988)
- "Vector-based Vaccines" (1988)
- "Mediators of Cell Growth and Differentiation" (1986)
- "Strategies for the Expression of Foreign Genes" (1985)
- "RNA and DNA Probes" (1984)



1994 RNA Editing Participants

Phylogenetic & Structural Relationships Among Proteins



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